

AMENDMENTS TO THE SPECIFICATION

Please amend the Specification as follows; after the second paragraph of page 6, insert the following paragraph (items 1-18, corresponding to original claims 1-18):

“The invention includes, without limitation, the following items 1-18:

1. Diagnostic procedure for identification of a disorder of the pancreas by determining the overall content of all known pancreatic elastases (iso-enzymes) in the serum, secretions or excretions of a patient.
2. Procedure according to item 1, characterised by the fact that identification is by means of immuno-chemical systems using monoclonal or polyclonal antibodies that can singly and specifically or cross-reactively recognise all elastase iso-enzymes with the amino-acid sequence Thr-Met-Val-Ala-Gly-Gly-Asp-Ile-Arg (SEQ ID NO:1).
3. Procedure according to item 2, characterised by the fact that the antibodies used are obtained by means of antigens consisting of the complete elastases 1, 2 and 3 or of their sub-units. The amino-acid sequence Thr-Met-Val-Ala-Gly-Gly-Asp-Ile-Arg (SEQ ID NO:1) is not used as an elastase fragment or as an immunologically effective partial sequence thereof.
4. Procedure according to item 3, characterised by the fact that the following synthetic peptides are primarily used as antigens which after the immunisation of animals induce antibodies which cross-reactively recognise several elastases but do not concern the amino-acid sequence Thr-Met-Val-Ala-Gly-Gly-Asp-Ile-Arg (SEQ ID NO:1):

NH₂-A-V-K-E-G-P-E-Q-V-I-P-I-N-COOH (SEQ ID NO:2)

NH₂-Y-T-N-G-P-L-P-D-K-L-Q-Q-A-R-COOH (SEQ ID NO:3)

NH2-R-S-G-C-N-G-D-S-G-G-P-L-N-COOH (SEQ ID NO:5)

NH2-G-P-L-N-C-P-T-E-D-G-G-W-Q-COOH (SEQ ID NO:4)

NH2-G-T-E-A-G-R-N-S-W-P-S-Q-I-COOH (SEQ ID NO:6)

NH2-H-N-L-S-Q-N-D-G-T-E-Q-Y-V-COOH (SEQ ID NO:7)

NH2-W-G-K-T-K-T-N-G-Q-L-A-COOH (SEQ ID NO:8)

NH2-V-S-S-R-G-C-N-V-S-R-K-P-T-COOH (SEQ ID NO:9)

NH2-G-G-E-E-A-R-P-N-S-W-P-W-Q-COOH (SEQ ID NO:10)

NH2-S-S-S-R-T-Y-R-V-G-L-G-R-H-N-COOH (SEQ ID NO:11)

NH2-K-D-W-N-S-N-Q-I-S-K-G-N-D-COOH (SEQ ID NO:12)

NH2-G-P-L-N-C-Q-A-S-D-G-R-W-COOH (SEQ ID NO:13)

NH2-G-A-L-P-D-D-L-K-Q-G-R-L-COOH (SEQ ID NO:14)

NH2-S-L-Q-Y-E-K-S-G-S-F-Y-COOH (SEQ ID NO:15)

NH2-F-G-C-N-T-R-R-K-P-T-V-F-T-COOH (SEQ ID NO:16)

5. Procedure according to items 1 – 5, characterised by the fact that antibodies are used singly or in a combination in an immuno-chemical identification system.

6. Immunological test kits for the diagnosis and progress check of diseases of the pancreas using stool or body fluids containing one or more of the antibodies used in items 2-5.

7. Procedure for obtaining monoclonal and/or polyclonal antibodies that react specifically with human elastase 1 in stool or body fluids and are induced by the usual immunisation procedures, characterised by the fact that the peptides A-V-K-E-G-P-E-Q-V-I-P-I-N (SEQ ID NO:2), Y-T-N-

G-P-L-P-D-K-L-Q-Q-A-R (SEQ ID NO:3), R-S-G-C-N-G-D-S-G-G-P-L-N (SEQ ID NO:5) and G-P-L-N-C-P-T-E-D-G-G-W-Q (SEQ ID NO:4) or immunogenic partial peptides thereof are used as antigens for the immunisation of vertebrates, especially of small mammals and birds.

8. Procedure according to item 7, characterised by the fact that before immunisation the free peptides are coupled with suitable carrier substances, primarily haemocyanine or albumin.

9. Procedure according to items 7 and 8, characterised by the fact that polyclonal antibodies are produced using chickens as experimental animals.

10. Polyclonal antibodies, insofar as they were produced according to items 7 to 9.

11. Monoclonal antibodies, insofar as they were produced according to items 7 and 8.

12. Peptide A-V-K-E-G-P-E-Q-V-I-P-I-N (SEQ ID NO:2).

13. Peptide Y-T-N-G-P-L-P-D-K-L-Q-Q-A-R (SEQ ID NO:3).

14. Peptide R-S-G-C-N-G-D-S-G-G-P-L-N (SEQ ID NO:5).

15. Peptide G-P-L-N-C-P-T-E-D-G-G-W-Q (SEQ ID NO:4).

16. Purification and detection systems for human elastase 1, characterised by the fact that they contain at least one of the invention antibodies according to items 10 and 11.

17. Immunological test kits for the diagnosis and progress check of diseases of the pancreas and of mucoviscidosis using stool or body fluids.

18. Immunological test kits according to item 17, characterised by the fact that 2 different antibodies are used (Sandwich-ELISA).